

# TIM (FL-249): sc-30145

## BACKGROUND

Glycolysis is an evolutionarily conserved series of ten chemical reactions that utilizes 11 enzymes to concomitantly generate pyruvate and ATP from glucose. Triosephosphate isomerase, known as TIM or TPI, is ubiquitously expressed and catalyzes the interconversion of dihydroxyacetone phosphate (DHAP) and glyceraldehyde-3-phosphate in the glycolytic pathway. The human TIM gene spans 3.5 kilobase pairs, contains 7 exons and encodes a 249 amino acid protein. The TIM promoter element contains a TATA box (positions -27 to -21) and multiple GC boxes (positions -126 to -48) that variably conform to the consensus Sp1-binding site. The GC boxes function in cis to the TATA box to control both the frequency and position of transcription initiation. Deficiencies in TIM results in a rare autosomal recessive condition where a metabolic block in glycolysis and accumulating DHAP in erythrocytes can lead to non-spherocytic haemolytic anaemia, recurrent infections, cardiomyo-pathy and neuromuscular dysfunctions.

## CHROMOSOMAL LOCATION

Genetic locus: TPI1 (human) mapping to 12p13.31; Tpi1 (mouse) mapping to 6 F2.

## SOURCE

TIM (FL-249) is a rabbit polyclonal antibody raised against amino acids 1-249 representing full length TIM of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

TIM (FL-249) is recommended for detection of TIM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TIM (FL-249) is also recommended for detection of TIM in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TIM siRNA (h): sc-37172, TIM siRNA (m): sc-37173, TIM shRNA Plasmid (h): sc-37172-SH, TIM shRNA Plasmid (m): sc-37173-SH, TIM shRNA (h) Lentiviral Particles: sc-37172-V and TIM shRNA (m) Lentiviral Particles: sc-37173-V.

Molecular Weight of TIM: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or Sol8 cell lysate: sc-2249.

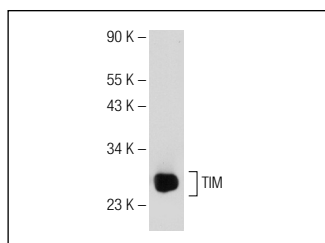
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

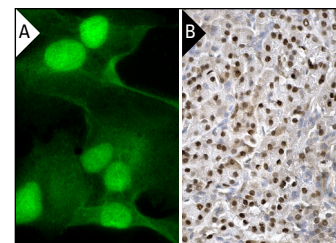
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



TIM (FL-249): sc-30145. Western blot analysis of TIM expression in Sol8 whole cell lysate



TIM (FL-249): sc-30145. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Roth, U., et al. 2010. Differential expression proteomics of human colorectal cancer based on a syngeneic cellular model for the progression of adenoma to carcinoma. *Proteomics* 10: 194-202.
- Zamorano-León, J.J., et al. 2010. A proteomic approach to determine changes in proteins involved in the myocardial metabolism in left ventricles of spontaneously hypertensive rats. *Cell. Physiol. Biochem.* 25: 347-358.
- Modrego, J., et al. 2010. Effects of platelets on the protein expression in aortic segments: A proteomic approach. *J. Cell. Biochem.* 111: 889-898.
- Hzizo, S.L., et al. 2010. Hsp70- and Hsp90-mediated proteasomal degradation underlies TPI sugarkill pathogenesis in *Drosophila*. *Neurobiol. Dis.* 40: 676-683.
- Sackmann-Sala, L., et al. 2011. Heterogeneity among white adipose tissue depots in male C57BL/6J mice. *Obesity* 20: 101-111.
- Chen, C.L., et al. 2013. Identification of potential bladder cancer markers in urine by abundant-protein depletion coupled with quantitative proteomics. *J. Proteomics* 85: 28-43.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



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Try **TIM (H-11): sc-166785** or **TIM (BB-7): sc-100541**, our highly recommended monoclonal alternatives to TIM (FL-249).